Plate 12.1 A modified 1947 Studebaker which achieved 149.95 mile/US gal in the 1949 Wood River competition

Plate 12.2 A modified 1959 Fiat 600 which achieved 244.35 mile/US gal in the 1968 Wood River competition

Plate 12.3 A modified 1959 Opel which achieved 376.59 mile/US gal in the 1973 Wood River competition

River class for slightly modified production cars. Driving style was not restricted, but the extent to which a normal production car could be tuned was limited to changes in carburation and ignition timing. The event was run on a closed airfield circuit with a minimum average speed of 30 mile/h (48 km/h) enforced. Awards for best miles per gallon and best ton miles per gallon (miles per gallon multiplied by vehicle weight) have been made. Small cars (Fiat 500s, Imps, Minis) have managed about 90 mile/gal (3.1 l/100 km) under these conditions, the current best being 96 mile/gal (2.94 l/100 km) by a Mini 1000 driven by B. D. Caddock. Larger cars, notably British Leyland 1800s, have given best ton miles per gallon results, 109.0 ton mile/gal having been achieved by L. C. H. Robinson. These impressive values were due more to the driving technique employed than to engine tuning.

In 1973 a competition for special vehicles was initiated. These vehicles were required only to be genuinely two-track vehicles and a classic three-wheel configuration has evolved[4]. Competition was over a 10 mile (16 km) course with a speed minimum of 10 mile/h (16 km/h) average enforced. In 1976 a special (see later) driven by B. W. Beattie achieved 1141 mile/gal (0.248 l/100 km)*.

12.3 Some Theory

How is it done? Marathoning is dominated by two considerations. Firstly the power needed to propel the vehicle must be kept to an absolute minimum, and secondly the engine and operating conditions must be chosen so that that power requirement is met with minimum fuel utilization.

*The understanding of this chapter is not greatly effected by the choice of units, and so traditional units, which are still used by most competitors, are preserved. Conversion constants to other systems can be found in the appendix.